

## Steps for finding volumes using cross sections:

1.) Write the general formula for the shape of the cross section.

2.) Rewrite the formula for the specific region involved,  $A(x)$  or  $A(y)$  (in terms of  $x$  if perpendicular to the  $x$ -axis, in terms of  $y$  if perpendicular to the  $y$ -axis.)

3.) Find the starting and ending points of the base region ( $a$ ) and ( $b$ ).

4.) Write and evaluate the integral:

$$\int_a^b A(y) dy$$

$$\int_a^b A(x) dx \quad \text{or}$$